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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/437,246	11/10/1999	SATOSHI SHINADA	Q56708	7699

7590 02/27/2002

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 02/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/437,246

Applicant(s)

SHINADA ET AL.

Examiner

Michael P Nghiem

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2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 43-45 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-7, 27 and 30-32 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-16, 26, 28, 29, 33, 35-41 and 46-49 is/are rejected.
- 7) ☒ Claim(s) 17-25, 33, 34, 42, 50 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 25, 2002 has been entered.

Withdrawal of Allowability

2. The indicated allowability of claims 1-4, 8, 9, 10/(1,2,4), 11/10/(1,2,4), 12/10/(1,2,4), 13-16, 37/(1,2,4), 38/1,2,4,8,9), 39/38/(1,2,4,8,9), 40/39/38/(1,2,4,8,9), 41/40/39/38/(1,2,4,8,9), 42/38/(1,2,4,8,9), and 46-49 are withdrawn in view of the newly discovered reference(s) to Nagasaki et al. (US 6,036,305). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4, 8, 9, 10/(1,2,4), 11/10/(1,2,4), 12/11/10/(1,2,4), 13/10/(1,2,4), 14-16, 26, 28, 29, 33, 35-41, and 46-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagasaki et al. (US 6,036,305).

Nagasaki et al. discloses all the claimed features of the invention including:

- A printing apparatus (Fig. 7) comprising:

- an ink cartridge (11) for providing ink to a print head (1) through a tapered ink supply needle (2) and removably attached to the print head (Fig. 2), comprising:

- an ink chamber (12) for containing ink; an ink supply port (16) for supplying ink from said ink chamber to the print head of the printing apparatus (Figs. 3, 5, 6), said ink supply port comprising an external opening (opening of 16);
- a packing member (19) provided in said ink supply port, forming an ink channel for allowing a flow of ink (Fig. 6), said packing member sealing the ink supply needle of the printing apparatus by fitting therewith (Fig. 6);
- a valve device (18) contained in said ink supply port elastically abutting against said packing member (Fig. 5), said valve device selectively opening and closing said ink channel in conjunction with the ink supply needle (Figs. 5, 6);
- said valve device does not comprise a sphere (non-spherical shape of 18);
- said valve device comes to close said ink channel of said packing member before the ink supply needle of the printing apparatus is completely detached from said packing member (Fig. 5);
- a porous member (14) accommodated in said ink chamber for absorbing ink (Fig. 3);
- said valve device comprising a substantially flat surface with which the ink supply needle contacts (surface contacting flat surface of 2);
- a guide body (left vertical wall adjacent 18, Fig. 6) for guiding said valve body to slide substantially vertically with respect to said packing member (Fig. 6);
- an elastic member (17) always urging said valve member toward said packing member (Figs. 5, 6);

- said valve member comprises a support structure for supporting said elastic member (surface supporting 17, Figs. 5, 6);
- said support structure is radially shaped (bottom surface of 18);
- said valve member comprises a flange (flange surface of 18 supporting 17, Figs. 5, 6) for supporting said elastic member;
- said packing member comprises a second surface (tapered surface of 19, Figs. 5, 6) facing said external opening with a tapered portion tapered from said external opening toward said ink chamber at said second surface, for guiding the ink supply needle of the printing apparatus (Figs. 5, 6);
- said tapered portion fits with the ink supply needle (Fig. 6);
- said valve body of said valve device comprises a surface facing said packing member formed with a convex surface (surface of 18, Figs. 5, 6);
- a packing retainer (20) for retaining said packing member at said external opening of said ink supply port (Fig. 3);
- said packing retainer comprises a film (20) capable of being penetrated by the ink supply needle of the printing apparatus (Fig. 5);
- said film is formed with a hole (hole of 20, Fig. 5) which enables the ink supply needle to easily pass through.

Even though Nagasaki et al. does not disclose that said hole is formed by cutting said film in a cross shape, it has been held that determination of patentability of a product is

based on the product itself and does not depend on its method of production. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

Allowable Subject Matter

4. Claims 17-25, 33, 34, 42/38/(1,2,4,8,9), and 50/(1,2,4,8,9) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 5-7, 10/5, 11/10/5, 12/11/10/5, 27, 30-32, 37/5, 38/5, 39/38/5, 40/39/38/5, 41/40/39/38/5, 42/38/5, and 50/5 are allowed.

Reasons For Allowance

6. The combination as claimed wherein said abutting of said valve device against only an upper part of said protruding rim performs said closing of said ink channel (claim 5) or said packing member is provided with a lubricant coat at least at an area with which the ink supply needle contacts (claim 17) or said valve body comprises an ink channel allowing ink to pass therethrough (claim 18) or said guide body comprises an axial portion and a guide block (claims 21, 27) or said valve body and said guide body are fixed to each other by fixing means (claim 24) said valve body and said

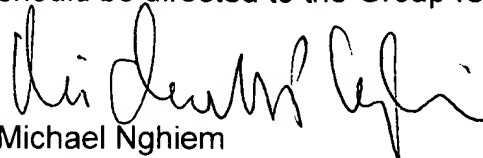
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guide body are formed as one unit with each other (claim 25) or wherein said valve body of said valve device comprises a surface, facing said packing member, provided with a notch (claim 30) or said spherical surface of said valve device has a diameter of curvature larger than a diameter of a widest part of said valve body (claim 34) or said packing retainer is a protruding portion (claim 42) or said ink supply port includes a concave portion, and wherein said packing member includes a protruding portion extending toward said supply port and fitting with the concave portion of said ink supply port (claim 50) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Amendment

7. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. An inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 308-0956.


Michael Nghiem

February 22, 2002